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September 14, 2018

Mr. Ben Conetta, Chief
Corrective Action Section
EPA Region 2 Hazardous Waste Programs Branch
290 Broadway
New York, NY 10007-1866

Re: Response to Comments on the Conceptual Site Model for the Chambers Works Facility, Deepwater, New Jersey

Dear Mr. Conetta:

On July 20, 2018, Chemours received comments from U.S. Environmental Protection Agency, Region 2 (EPA), in consultation with the New Jersey Department of Environmental Protection (NJDEP), on the July 18, 2017 Conceptual Site Model (CSM) for Poly- and Perfluoroalkyl Substances (PFAS) for the Chambers Works facility (the site). These comments were discussed in a brief conference call on September 6, 2018 to clarify technical details. Below are the comments in italics followed by our responses.

Comment 1: Sources of PFAS and HFPO Dimer Acid: The CSM should more thoroughly evaluate all known sources of PFAS at the DuPont/Chemours facility including the wastewater treatment plant (which has continually received PFAS-contaminated ground water and customers' wastewater) and the on-site landfill. Sources of HFPO Dimer Acid, such as the Krytox manufacturing operations, should also be thoroughly evaluated in the document.

Response: Chemours is actively evaluating the sources of PFAS and HFPO Dimer Acid (HFPO-DA) at Chambers Works at the process level. The site completed wastewater sampling for HFPO-DA and PFAS in area sumps, regional tanks, and the wastewater treatment plant (WWTP). Air sampling was conducted around process FRD-926, and air sampling around building J26 is being planned. In addition, sampling of the Delaware River for PFAS and HFPO-DA is also planned for September. Results of these sampling efforts will be shared once they become available. As discussed on the September 6, 2018 conference call, these data and other data that have been collected subsequent to the publication of the first CSM report will be integrated into a revised PFAS CSM report. The timing in which this revised CSM report will be prepared will be discussed at the upcoming quarterly meeting on September 19, 2018.

Comment 2: Effectiveness of Hydraulic Containment: Chemours is relying on containment of groundwater through operation of the existing interceptor well system and the completion of the sheet pile barrier. While EPA and NJDEP believe that these systems will help contain groundwater on site, there is no evidence demonstrating that groundwater is or will be completely contained. The CSM should take into account the possibility that groundwater may migrate off-site despite containment efforts.

Response: Control of site groundwater is evaluated semi-annually as a requirement of the site NPDES-DGW permit. The results of this evaluation, data, and groundwater surface maps are provided to the agencies in the semi-annual DWG Report. Based on these evaluations and with the completion of the sheet pile barrier (SPB) along the Delaware River, the large majority of impacted groundwater is believed to be under control with only small areas remaining to be investigated. Chemours has and will continue to work with the agencies to address areas at which groundwater is observed or suspected to be not under control. As discussed during the September 6, 2018 conference call, Chemours will bring the latest groundwater surface maps to the quarterly meeting on September 19th so that the project team can work together to evaluate the control of groundwater and to plan additional work accordingly.

Comment 3: Delineation of Off-Site Groundwater Contamination Plume: As we have previously discussed, the installation and sampling of additional off-site monitoring wells by Chemours is necessary for the full delineation of site-related PFAS, and HFPO Dimer Acid, in the off-site groundwater contamination plume. Once there is full delineation of the horizontal and vertical extent groundwater contamination found off-site, the CSM should be updated, taking into account the effect of off-site groundwater pumping wells.

> **Response**: Chemours is proposing to install clustered monitoring wells at multiple off-site locations as shown on the attached figure. These proposed locations, as well as a date for the creation of an integrated revised PFAS CSM, can be discussed at the September 19th quarterly meeting.

Comment 4: Updating the CSM to Include New Information: The CSM should be updated to include all PFAS-related information, obtained subsequent to the preparation of the July 2017 version of the CSM.

> **Response**: As discussed during the September 6, 2018 conference call, there have been several investigation programs that have generated additional PFAS and HFPO-DA data since the publication of the PFAS CSM and other programs are currently ongoing or in the planning stages. These and other data that have been/will be collected subsequent to the publication of the first PFAS CSM report will be integrated into a revised PFAS CSM report. The timing in which this revised CSM report will be prepared will be discussed at the upcoming quarterly meeting on September 19, 2018.

Comment 5: Contaminant Transport Mechanism: Please be aware that the contaminant transport mechanism for both PFAS and HFPO Dimer Acid may require further development once the off-site groundwater contamination plume is fully delineated.

> **Response**: Chemours agrees.

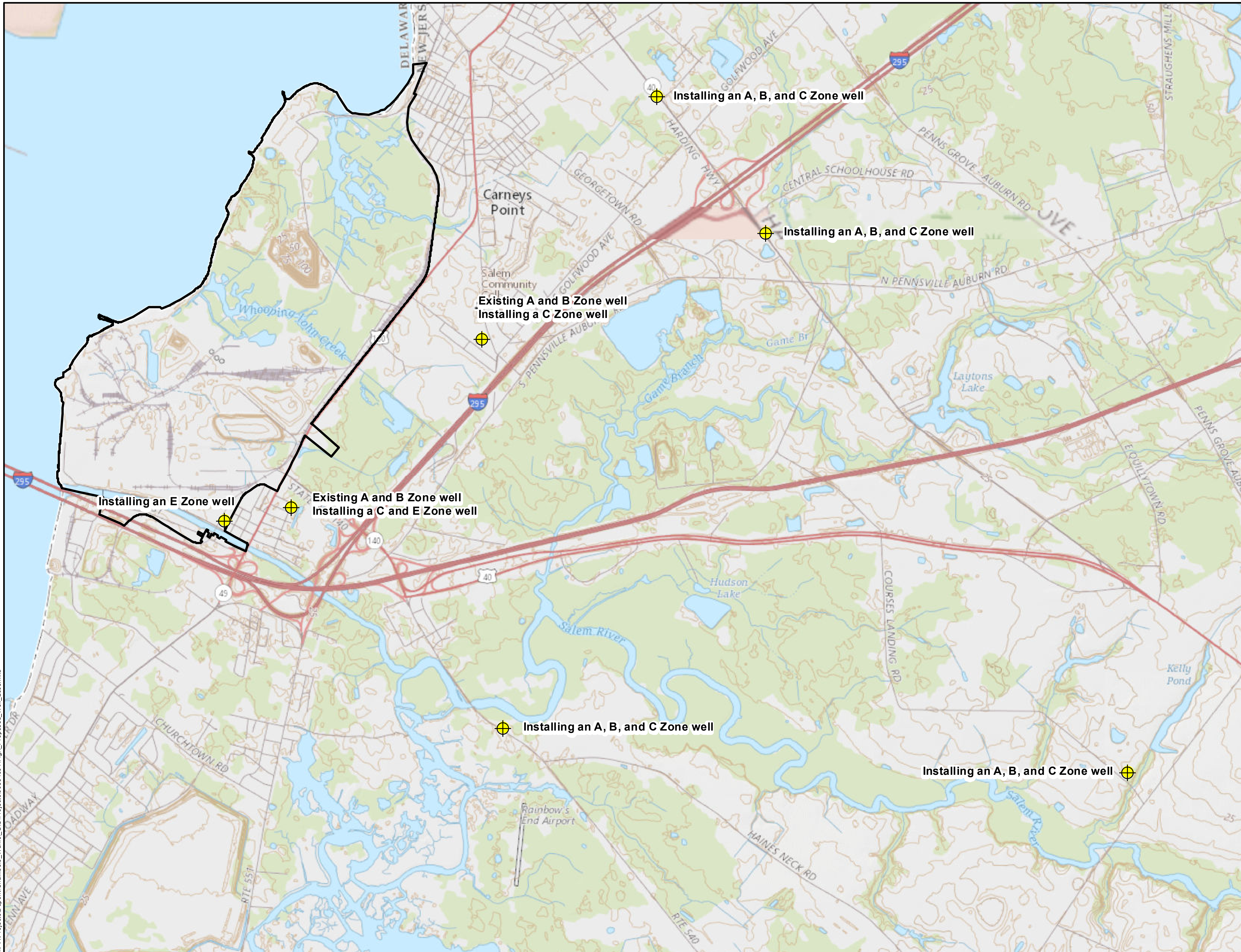
If you have any questions regarding the information provided herein, please email me at Andrew.S.Hartten@chemours.com or call me at 302-773-1289.

Sincerely,

Andrew S. Hartten
Project Director, Chambers Works
Chemours Corporate Remediation Group

cc: James Haklar, EPA Region 2
Helen Dudar, NJDEP

Attachments



Path: V:\Projects\Dupont\Chambers_Works_GIS\Projects\60554934\FigX_Proposed_Well_Locs.mxd

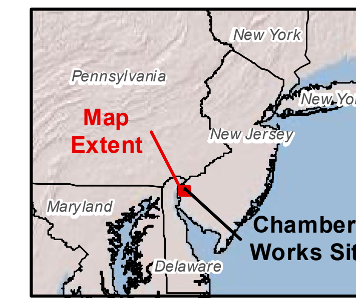
LEGEND

- PROPOSED WELL LOCATION
- CHEMOURS CHAMBERS WORKS SITE

Notes:

Map Projection: NAD83 NJ State Plane feet

Basemap: Service Layer Credits: Copyright:© 2014 Esri Content may not reflect National Geographic's current map policy. National Geographic, Esri, DeLorme, HERE, UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, increment P Corp.



N W E S

0 1,250 2,500 5,000

Feet

1 inch = 2,500 feet

MAP FORMATTED FOR "B" (11" X 17") SIZE SHEET.
TEXT SCALE NOT VALID FOR DIFFERENT PAGE SIZE.

AECOM

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PROPOSED WELL LOCATION MAP

CHEMOURS CHAMBERS WORKS COMPLEX
DEEPWATER, NEW JERSEY

TASK NUMBER: 18001	PROJECT NUMBER: 60554934
DESIGNED BY: M.LAYTON	DATE: 9/11/2018
DRAWN BY: M.LAYTON	FIGURE NUMBER: X
DATA QUALITY CHECK BY: T.MCGEE	